

Exhibit 4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Case No. 11-1001-CON0419

In re Application of:

Sonos, Inc.

Serial No.: 16/389,906

Filing Date: April 19, 2019

Title: Systems and Methods for Networked
Music Playback

Confirmation No.: 9117

Examiner: Jesse A. Elbin

Group Art Unit: 2656

RESPONSE TO FINAL OFFICE ACTION
MAILED SEPTEMBER 9, 2019

In response to the Final Office Action mailed September 9, 2019, Applicant submits the following claim amendments and remarks pursuant to 37 C.F.R. § 1.116.

Specification Amendments begin at page 2

Claim Amendments begin at page 3.

Remarks begin at page 17.

Applicant believes that all fees required for the present response have been filed during the electronic filing process. Applicant authorizes the office to charge any underpayment or credit any overpayment to Deposit Account No. 506632, and to treat any filing in this matter that requires an extension of time as incorporating a request for the extension.

SPECIFICATION AMENDMENTS

[001] This application is ~~related to~~ a continuation of U.S. non-provisional Patent Application No. 15/872,500, filed on January 16, 2018, entitled “Systems and Methods for Networked Music Playback,” which is a continuation of U.S. non-provisional Patent Application No. 14/520,578, filed on October 22, 2014, entitled “Systems and Methods for Networked Music Playback,” which is a continuation of U.S. non-provisional Patent Application No. 13/341,237, filed on December 30, 2011, entitled “Systems and Methods for Networked Music Playback,” all of which are incorporated herein by reference in their entirety.

CLAIMS

1. (Currently Amended) A computing device comprising:
at least one processor;
a non-transitory computer-readable medium; and
program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:

operating in a first mode in which the computing device is configured for playback of ~~a remote playback queue provided by given audio content that is obtainable from a~~ cloud-based computing system associated with a cloud-based media service;

while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the ~~given audio content~~ remote playback queue;

while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;

based on receiving the user input, transmitting an instruction for ~~the at least one given playback device to take over playback responsibility for playback of the remote playback queue~~ the given audio content to be transferred from the computing device to, wherein the instruction configures ~~the at least one given playback device such that i) an identifier of the given audio content and a playback position for the given audio content are provided to the given playback device and ii) the given playback device becomes~~

~~configured for playback of the given audio content based on the identifier and the playback position to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;~~

detecting an indication that playback responsibility for the ~~remote playback queue given audio content~~ has been successfully transferred from the computing device to the at least one given playback device; and

after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the ~~remote playback queue given audio content~~ to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the ~~remote playback queue given audio content~~ and the computing device is no longer configured for playback of the ~~remote playback queue given audio content~~.

2. (Canceled)

3. (Canceled)

4. (Currently Amended) The computing device of claim 1, wherein the instruction comprises an instruction for the cloud-based computing system associated with the media service to provide the ~~data identifying the next one or more media items identifier of the given audio~~

~~content~~ to the given playback device for use in ~~obtaining-retrieving the-given-audio-content at least one media item~~ from the cloud-based computing system associated with the ~~cloud-based~~ media service.

5. (Currently Amended) The computing device of claim 1, wherein the instruction comprises an instruction for the cloud-based computing system associated with the ~~cloud-based~~ media service to provide the ~~given-audio-content at least one media item~~ to the given playback device.

6. (Currently Amended) The computing device of claim 1, wherein the representation of the one or more playback devices comprises at least one selectable ~~indicator-indicator~~ for a group of playback devices that includes the given playback device and one or more other playback devices that are to be configured for synchronous playback of the ~~given-audio-content remote playback queue~~, and wherein the user input indicating the selection of at least one given playback device from the one or more playback devices comprises user input indicating a selection of the group of playback devices.

7. (Currently Amended) The computing device of claim 1, wherein operating in a first mode in which the computing device is configured for playback of the ~~given-audio-content remote playback queue~~ comprises operating in the first mode in which the computing device has received user input indicating a selection of the ~~given-audio-content remote playback queue~~ for playback by the computing device but the computing device has not yet begun playback of the ~~given-audio-content remote playback queue~~.

8. (Currently Amended) The computing device of claim 1, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:

beginning to operate in the first mode after i) launching a media application associated with the cloud-based media service and ii) receiving user input indicating a selection of the ~~given audio content~~ remote playback queue.

9. (Currently Amended) The computing device of claim 1, wherein:

operating in the first mode further involves providing a control interface comprising one or more selectable control icons that are configured to control playback of the ~~given audio content~~ remote playback queue by the computing device;

transitioning from the first mode to the second mode further involves modifying the control interface such that the one or more selectable control icons are configured to control playback of the ~~given audio content~~ remote playback queue by the at least one playback device instead of the computing device.

10. (Original) The computing device of claim 9, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:

after transitioning to the second mode, receiving user input indicating a selection of a given control icon of the one or more selectable control icons, wherein the given control icon corresponds to a given transport control operation; and

based on receiving the user input indicating the selection of the given control icon, causing the corresponding transport control operation to be executed by the given playback device.

11. (Original) The computing device of claim 10, wherein the transport control operation comprises one of a play operation, a pause operation, a skip forward operation, or a skip back operation.

12. (Currently Amended) The computing device of claim 1, wherein the cloud-based computing system associated with the cloud-based media service includes one or more cloud servers.

13. (Canceled)

14. (Currently Amended) The computing device of claim 1, wherein displaying the representation of the one or more playback devices comprises:

displaying the representation of the one or more playback devices in response to receiving a selection of a displayed icon indicating that playback responsibility for the ~~given audio content~~ remote playback queue can be transferred.

15. (Currently Amended) A non-transitory computer-readable medium having stored thereon program instructions that, when executed by at least one processor, cause a computing device to perform functions comprising:

operating in a first mode in which the computing device is configured for playback of a ~~remote playback queue provided by given audio content that is obtainable from a~~ cloud-based computing system associated with a ~~cloud-based~~ media service;

while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the ~~given audio content remote playback queue~~;

while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;

based on receiving the user input, transmitting an instruction for ~~the at least one given playback device to take over playback responsibility for playback of the remote playback queue the given audio content to be transferred from the computing device to~~ wherein the instruction configures the at least one given playback device such that i) an identifier of the given audio content and a playback position for the given audio content are provided to the given playback device and ii) the given playback device becomes configured for playback of the given audio content based on the identifier and the playback position to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;

detecting an indication that playback responsibility for the ~~remote playback queue given audio content~~ has been successfully transferred from the computing device to the at least one given playback device; and

after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the ~~remote playback queue given audio content~~ to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the ~~remote playback queue given audio content~~ and the computing device is no longer configured for playback of the ~~remote playback queue given audio content~~.

16. (Canceled)

17. (Canceled)

18. (Currently Amended) The non-transitory computer-readable medium of claim 15, wherein the instruction comprises an instruction for the cloud-based computing system associated with the ~~cloud-based media service to provide the identifier of the given audio content data identifying the next one or more media items~~ to the given playback device for use in obtaining the ~~given audio content at least one media item~~ from the cloud-based computing system associated with the ~~cloud-based media service~~.

19. (Currently Amended) The non-transitory computer-readable medium of claim 15, wherein the instruction comprises an instruction for the cloud-based computing system

associated with the media service to provide ~~the given audio content~~ at least one media item to the given playback device.

20. (Currently Amended) A method carried out by a computing device, the method comprising:

operating in a first mode in which the computing device is configured for playback of ~~a remote playback queue provided by given audio content that is obtainable from a cloud-based~~ computing system associated with a cloud-based media service;

while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for ~~the given audio content~~ remote playback queue;

while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;

based on receiving the user input, transmitting an instruction for ~~the at least one given playback device to take over playback responsibility for playback of the remote playback queue~~ the given audio content to be transferred from the computing device to, wherein the instruction configures the at least one given playback device ~~such that i) an identifier of the given audio content and a playback position for the given audio content are provided to the given playback device and ii) the given playback device becomes configured for playback of the given audio content based on the identifier and the playback position to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that~~

are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service, and (iii) play back the retrieved at least one media item;

detecting an indication that playback responsibility for the remote playback queue given audio content has been successfully transferred from the computing device to the at least one given playback device; and

after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue given audio content to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue given audio content and the computing device is no longer configured for playback of the remote playback queue given audio content.

21. (New) The computing device of claim 1, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:

before displaying the representation of the one or more playback devices, receiving an indication that the one or more playback devices in the media playback system are available to accept playback responsibility for the remote playback queue.

22. (New) A zone player comprising:

a network interface that is configured to facilitate network communication, via one or more data networks, with (a) a client station installed with a media-playback application for a

cloud-based media service and (b) a cloud-based computing system associated with the cloud-based media service;

at least one processor;

a tangible, non-transitory computer-readable medium; and

program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to:

while the client station is configured for playback of a remote playback queue provided by the cloud-based computing system, receive, via the network interface, an instruction to take over responsibility for playback of the remote playback queue from the client station; and

after receiving the instruction, (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service, and (iii) play back the retrieved at least one media item.

23. (New) The zone player of claim 22, wherein the instruction further comprises data identifying a first media item in the remote playback queue that the client station was configured to play back when sending the instruction, and wherein the zone player further comprises program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to, after receiving the instruction:

use the data identifying the first media item in the remote playback queue to retrieve the first media item from the cloud-based media service, and

play back the first media item before playing back any other retrieved media item in the remote playback queue.

24. (New) The zone player of claim 22, wherein:

the data identifying the next one or more media items in the remote playback queue comprises a respective uniform resource identifier (URI) for each media item included in the next one or more media items.

25. (New) The zone player of claim 24, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to:

after obtaining the respective URI for each media item included in the next one or more media items, add the respective URI for each media item included in the next one or more media items to a local playback queue maintained by the zone player.

26. (New) The zone player of claim 24, wherein the URI for the first media item was previously stored in a local playback queue maintained by the client station.

27. (New) The zone player of claim 22, wherein the instruction to take over the playback responsibility from the client station for the remote playback queue is received by the zone

player as a result of a user inputting a request into the client station to transfer the playback responsibility for the remote playback queue from the client station to the zone player.

28. (New) The zone player of claim 22, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to:

provide, via the network interface to the cloud-based computing system, an indication that the zone player has successfully taken over the playback responsibility for the remote playback queue.

29. (New) The zone player of claim 22, wherein:

the instruction to take over the playback responsibility from the client station for the remote playback queue further comprises a play position at which to begin playing back the at least one media item; and

the program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to play back the retrieved at least one media item comprises program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to play back the retrieved at least one media item beginning at the play position.

30. (New) The zone player of claim 22, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to:

provide, via the network interface, an indication that the zone player is available to accept the playback responsibility for the remote playback queue.

31. (New) The zone player of claim 22, wherein:

the instruction to take over the playback responsibility from the client station for the remote playback queue comprises an instruction for a group of two or more zone players that includes the zone player to take over the playback responsibility from the client station for the remote playback queue; and

the program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to play back the retrieved at least one media item comprise program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to play back the retrieved at least one media item in synchrony with at least one other zone player included in the group of two or more zone players based on timing information for the retrieved at least one media item that is generated by the zone player.

32. (New) The zone player of claim 22, wherein the client station is additionally installed with a dedicated controller application for the zone player, and wherein, after the instruction to take over the playback responsibility from the client station for the remote playback queue is

received, the zone player is configured to receive instructions for controlling the zone player's playback of media items from the remote playback queue that are initiated by each of the media-playback application installed on the client station and the dedicated controller application installed on the client station.

33. (New) The zone player of claim 22, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to:

transmit, to the cloud-based computing system, an indication of a current point of the zone player's playback within the remote playback queue.

34. (New) The zone player of claim 22, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor such that the zone player is configured to:

receive, from the cloud-based computing system, an indication that a user has modified the remote playback queue in a manner that impacts the previously-received data identifying the next one or more items in the remote playback queue.

35. (New) The zone player of claim 22, wherein the instruction to take over the playback responsibility from the client station for the remote playback queue is received from one or both of the client station or the cloud-based computing system.

REMARKS

1. Summary of the Office Action

In the Final Office action dated September 9, 2019, (“the Action”) the Examiner rejected claims 1-5 and 7-20 under 35 USC 103 as being unpatentable over US Patent Pub. 2007/0053514 (“Imai”) in view of US Patent Pub. 2012/0304233 (“Roberts”). The Examiner also rejected claim 6 under 35 USC 103 as being unpatentable over Imai in view of Roberts in view of US Patent Pub. 2010/0299639 (“Ramsay”).

2. Summary of Examiner Interview

A telephonic examiner interview took place on October 23, 2019. Participants included Examiner Jesse Elbin and Applicant’s representative Brandon Kennedy. During the interview, the participants discussed the Action, the references cited in the Action, and proposed amendments to the claims. No agreement regarding allowance was reached. Applicant thanks the Examiner for his time in conducting the interview.

3. Status of the Claims

Without conceding the merits of the claim rejections and solely to advance prosecution, Applicant has amended claims 1, 4-9, 12, 14-15, and 18-20, and has canceled claims 2-3, 13, and 16-17. Applicant has added new claims 21-35. Claims 1, 4-12, 14-15, and 18-35 are now pending, of which claims 1, 15, 20, and 22 are independent and the remainder are dependent. No new matter has been added by way of these amendments.

4. Response to Rejections under 35 U.S.C. § 103

As noted above, the Examiner rejected independent claims 1, 15, and 20 under § 103 as unpatentable over the combination of Imai and Roberts. However, Applicant respectfully submits that the combination of Imai and Roberts does not teach each and every element of the independent claims, as amended. At a minimum, the combination of Imai and Roberts fails to teach at least a computing device that is “configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service . . . transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device . . .” in combination with the other elements found in amended independent claims 1, 15, and 20.

For example, Imai discusses a system “for the user to switch from a mobile terminal to another content playback device to continuously view and listen to certain content.” Imai at [0008]. However, Imai instructs a reader to “assume that the user is viewing and listening to specific content recorded in the mobile terminal 100 away from home (in step ST501). When the user then comes home, he or she can make a request of the mobile terminal 100 for a continuous playback of the content in order to cause the content playback terminal 300 at home to continuously play back the content . . .” *Id.* at [0051]. The mobile terminal 100 in Imai responds by, among other things, “mak[ing] a terminal searching request of the terminal searching means 107 so as to search for a terminal (i.e., a content server terminal 200 or the content playback terminal 300) which exists on the network 400.” *Id.* at [0060]. The content playback terminal 300 in Imai eventually plays back the content from the content server terminal 200. *See, e.g., Id.* at [0084-0085], Figure 5.

However, Applicant respectfully submits that none of the examples in Imai amount to a computing device that is “configured for playback of a remote playback queue provided by a

cloud-based computing system associated with a cloud-based media service . . . transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device . . .”

Applicant has also reviewed Roberts and Ramsay and submits that they do not compensate for the shortcomings of the primary reference, Imai.

Because the combination of Imai and Roberts does not teach every element of independent claims 1, 15, and 20, the combination of Imai and Roberts does not render claims 1, 15, and 20 unpatentable. Consequently, Applicant requests withdrawal of the § 103 rejections of claims 1, 15, and 20 over the combination of Imai and Roberts, and submits that claims 1, 15, and 20 should be allowed. Further, Applicant submits that dependent claims 4-12, 14, and 18-21 should also be allowed for at least the reason that they each depend from an allowable independent claim. Finally, Applicant respectfully submits that new claims 22-35 include elements similar to those discussed above and are also allowable for at least this reason.

Respectfully submitted,

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Date: November 1, 2019

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